

REMARKS

Claims 1-5, 8-11, 14-16, and 19-20 were pending at the time of the Office Action. In this Amendment, claims 1-5 and 15-16 have been cancelled and claims 8 and 19 have been amended to clarify an aspect of the invention. Support is found in, for example, paragraphs [0043] and [0050] of the application-as-published. Care has been undertaken not to introduce new matter.

Informational Disclosure Statement

The Examiner indicated that the Chinese Office Action issued with respect to Chinese Patent Application No. CN 2004100084944 is not be considered as to the merits because it does not have a publication date. The Chinese Office Action was issued and mailed on December 7, 2007. In case of the foreign Office Action listed on the IDS, its issue date satisfies the publication date requirement under 37 CFR 1.98. Applicants respectfully request the Chinese Office Action to be considered as to the merits.

Claim Rejections Under 35 U.S.C. §103(a)

Claims 1-5, 15 and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Inoue et al. (U.S. Patent No. 5,344,498, hereinafter “Inoue”) in view of Neerinck et al. (D.G. Neerinck and T.J. Vink, Thin Solid Films 278 (1996) 12-17, hereinafter “Neerinck”) and in further view of Adurodija et al. (F.O. Adurodija, H. Izumi, T. Ishihara, H. Yoshioka and M. Motoyama, J. Appl. Phys. 88(2000) 4175-4180, hereinafter “Adurodija”).

In response, independent claims 1 and 15 has been cancelled. Therefore, the rejections with respect to independent claims 1 and 15 and claims 2-5 and 16 dependent upon claims 1 and 15 are rendered moot.

Claims 8-14, 19 and 20 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Nakamura et al. (U.S. Patent No. 7,030,413, hereinafter “Nakamura”) in view of Vink et al. (T.J. Vink, W. Walrave, J.L.C. Daams, P.C. Baarslag, J.E.A.M. van den Meerakker, *Thin Solid Films* 266 (1995) 145-151, hereinafter “Vink”) and further in view of Adurodija. The rejections are respectfully traversed for the following reasons.

Amended claims 8 and 19, *inter alia*, recite “a substantially intrinsic first amorphous silicon layer formed on said front surface of said single-crystalline silicon substrate, the substantially intrinsic first amorphous silicon layer consisting of a single layer.” As disclosed in FIG. 1, one example of what is recited in claims 8 and 19, the substantially intrinsic i-type amorphous silicon layer 2 formed on the upper surface of the n-type single-crystalline silicon substrate 1 consists of a single layer.

The proposed combination of Nakamura, Vink and Adurodija fails to disclose the limitations of claims 8 and 19.

Nakamura’s intrinsic amorphous silicon carbide layer 13 and p-type amorphous silicon film 14, on which the Examiner relied to disclose the “substantially intrinsic first amorphous silicon layer,” is composed of two layers, intrinsic amorphous silicon carbide layer 13 and p-type amorphous silicon film 14. In contrast, claims 8 and 19 require the “the substantially intrinsic first amorphous silicon layer” to “consist[ing] of a single layer.”

In addition, Vink, which was cited for the indium oxide layer, and Adurodija, which was cited for the carrier concentration, fail to cure deficiencies of Nakamura.

Accordingly, as each and every limitation must be disclosed or suggested by the cited prior art references in order to establish a *prima facie* case of obviousness (*see*, M.P.E.P. § 2143.03) and for at least the foregoing reasons the combination of Nakamura, Vink and

Adurodija fails to do so, it is respectfully submitted that claims 8 and 19 and the claims dependent thereon are patentable over the combination of Nakamura, Vink and Adurodija.

Conclusion

Applicant submits that all of the claims are in condition for allowance. Accordingly, this case should now be ready to pass to issue; and Applicant respectfully requests a prompt favorable reconsideration of this matter.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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